Electronic Supporting Information

One Step Assembly of a Nonanuclear $Cr^{III}_2Ni^{II}_7$ Bimetallic Cyanide Bridged Complex

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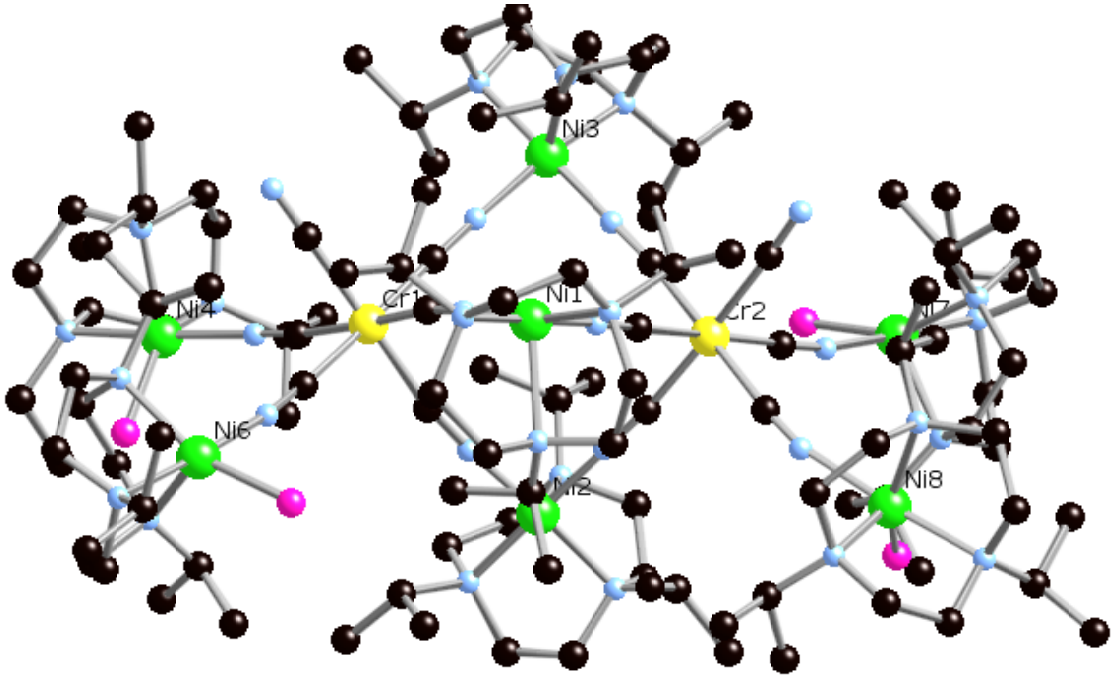

Figure S1. View of the structure of **1** (H atoms are removed for clarity).

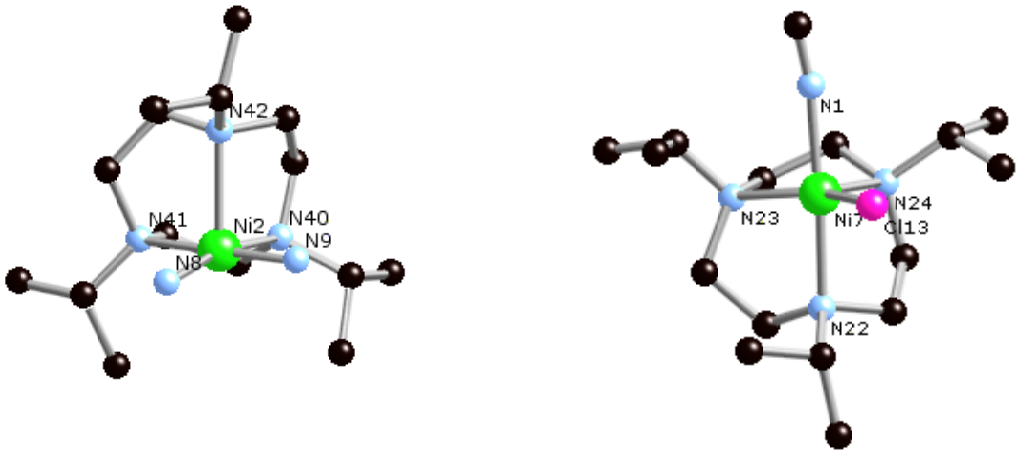

Figure S2. View of the coordination sphere of (left) a central Ni atom (Ni2) and (right) a peripheral one (Ni7).

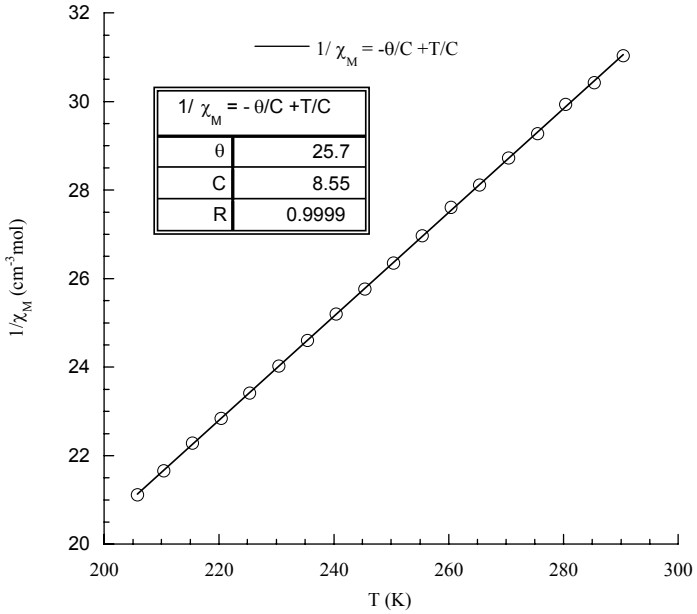

Figure S3. $1/\chi_M = f(T)$ for T > 200 K (o) experimental, (—) best fit.

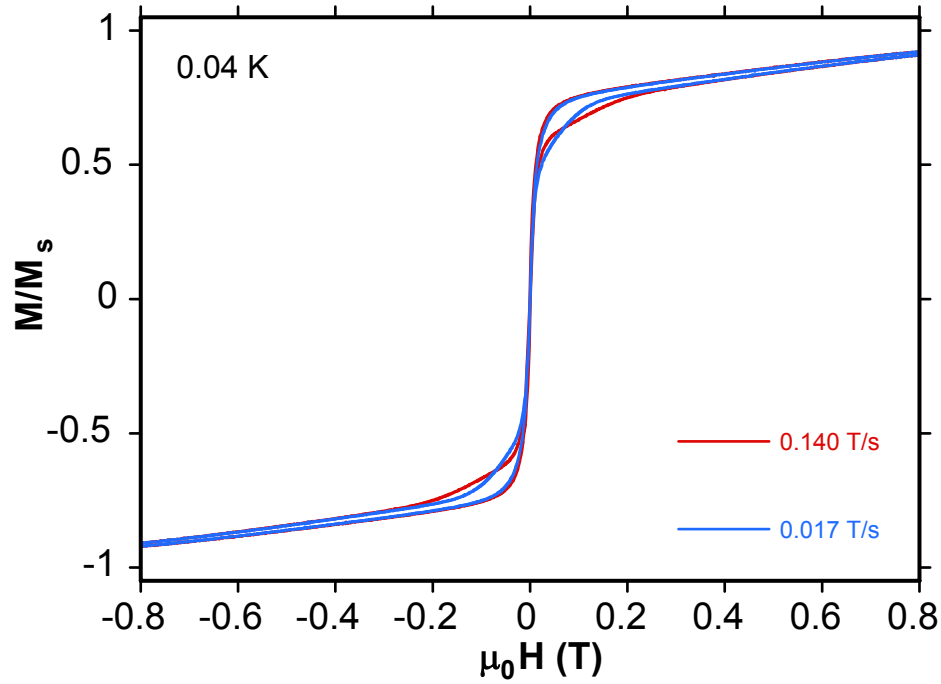

Figure S4. Magnetization vs. field at T = 0.04 K with two different sweep rates. The sample was cooled in a field of –1.4 Tesla and then cycled

□□□□□□□□on of the molar magnetic susceptibility in the form of $\chi_M T$ for a $Cr^{III}Ni^{II}_2$ complex .

$\chi_M T = (Ng^2\beta^2/k)*XI*T/(kT-zJ*XI)$

$XI = (XIPA + XIPER*2)/3$

zJ is the intermolecular interaction parameter within the mean field approximation, g is the mean g-value for the three metal ions

XIPA and XIPER are respectively the contributions corresponding to the parallel and the perpendicular susceptibilities that must be calculated because we introduce an axial anisotropy parameter D.

XIPA = [NUMERPARA/DENOM]

XIPER = [NUMERPER/DENOM]

DENOM= 2*[exp(-7D/kT) + exp(-D/kT) + exp(3D/kT) + exp(5D/kT)]. + 6*exp(-7J/2kT) + 6*exp(-3J/2kT) + 4*exp(-6J/kT) + 4*exp(-4J/kT) + 4*exp(-3J/kT) + 2*exp(-15J/2kT) + 2*exp(-11J/2kT).

NUMERPARA = [24.5*exp(-7D/kT) + 12.5*exp(-D/kT) + 4.5*exp(3D/kT) + 0.5*exp(5D/kT) + 17.5*exp(-7J/2kT) + 17.5*exp(-3J/2kT) + 5*exp(-6J/kT) + 5*exp(-4J/kT) + 5*exp(-3J/kT) + 0.5*exp(-15J/2kT) + 0.5*exp(-11J/2kT)]

NUMERPER = [– (7/6D)*exp(-7D/kT) – (11/6D)* exp(-D/kT) – (9/2D)*exp(3D/kT) + (15/2D)* exp(5D/kT) + 8*exp(5D/kT). + 17.5*exp(-7J/2kT) + 17.5*exp(-3J/2kT) + 5*exp(-6J/kT) + 5*exp(-4J/kT) + 5*exp(-3J/kT) + 0.5*exp(-15J/2kT) + 0.5*exp(-11J/2kT)]